IN THE CLAIMS

Please cancel claim 15 without prejudice and add new claims 26-28, and amend the claims as follows:

1. (currently amended) A quartz glass crucible for pulling up a silicon single crystal, said quartz glass crucible comprising:

an opaque outer layer formed by melting natural silica powder and a first transparent layer formed on an inside thereof,

wherein the first transparent layer is made of natural quartz glass and has a thickness of 0.4 to 5.0 mm,

and wherein a second transparent layer made of synthetic quartz glass is formed over **only a part of an inner surface of the crucible, said part including** at least an inside region of the crucible that extends from 0.15 L to 0.55 L from a center of a bottom of an inner surface of the quartz glass crucible,

wherein L is a distance from the center of the bottom of the inner surface of the quartz glass crucible to an upper end face of the quartz glass crucible adjacent the inner surface of the crucible.

2. (previously presented) The quartz glass crucible according to Claim 1, wherein the second transparent layer has a thickness of 0.2 to 1.5 mm.

3. (currently amended) The quartz glass crucible according to Claim 1, wherein the inner surface of the crucible in **a** ~~the~~ range from 0.6 L to 1.0 L from the center of the

bottom of the inner surface of the quartz glass crucible to the upper end face along the inner surface thereof is provided by the first transparent layer of natural quartz glass.

4. (currently amended) The quartz glass crucible according to Claim 1, wherein the second transparent layer has a thickness of 0.2 mm or less on the inner surface of the crucible in a range from 0.6 L to 1.0 L from the center of the bottom of the inner surface of the quartz glass crucible.

5. (previously presented) The quartz glass crucible according to Claim 1, wherein the second transparent layer has an average OH group concentration CA from 100 to 300 ppm, the first transparent layer has an average OH group concentration CB from 60 to 150 ppm, and the opaque outer layer has an average OH group concentration CC from 20 to 60 ppm, and said OH group concentrations satisfy the relation: CA > CB > CC.

6. (currently amended) A method for producing a quartz glass crucible for pulling up a silicon single crystal, said method comprising:

making an inner cavity of a quartz glass crucible base body mounted on a rotatable mold in a high temperature atmosphere,

feeding natural silica powder to the high temperature atmosphere in an inner cavity of an opaque outer layer after or during the formation of the opaque outer layer,

partially melting the inner cavity to form a first transparent layer of natural quartz glass on an entire inner surface of the opaque outer layer by melting and vitrifying the natural silica powder, and

feeding a synthetic silica powder and melting and vitrifying the synthetic silica powder to form a second transparent layer of synthetic quartz glass on **only a part of** an inside surface of the first transparent layer of natural quartz glass**, said part including** ~~**in**~~ at least a region extending from 0.15 L to 0.55 L, from a center of a bottom of an inner surface of the crucible wherein L is a distance from the center of the bottom of the inside surface of the quartz glass crucible to an upper end face adjacent the inside surface of the crucible.

7. (currently amended) A quartz glass crucible **as recited in claim 1,** ~~**for pulling up a silicon single crystal, said quartz glass crucible comprising: an opaque outer layer of natural quartz glass and a transparent layer formed on an inside thereof,**~~ wherein the **inner surface of the crucible** ~~**transparent layer**~~, after pulling up a single crystal, has a number of brown rings per unit area ($cm^2$) in a region from an initial surface level of a silicon melt to 0.3 M therebelow, wherein M is a length from the initial surface level of the silicon melt to a surface level of a remaining melt after pulling up a single crystal measured along the inner surface of the quartz glass crucible, said number of brown rings being at least 1.8-fold greater than a number of brown rings observed in a region up to 0.3 M above the surface level of the remaining melt.

8. (previously presented) The quartz glass crucible according to Claim 7, wherein the number of brown rings per unit area ($cm^2$) in the region from the initial surface level of a melt to 0.3 M therebelow is at least 2.5-fold greater than the number of brown rings in the region up to 0.3 M above the surface level of the remaining melt.

9. (currently amended) The quartz glass crucible to Claim 7, wherein the ~~transparent layer is of natural quartz glass or a mixture of natural and synthetic quartz glasses and forms~~ the inner surface of the crucible ~~in a region~~ **extends** ~~extending~~ from the initial surface level of a silicon melt to 0.3 M, **and wherein** the ~~transparent layer including a~~ **second** transparent ~~syntheticquartz glass~~ layer of synthetic quartz glass is formed on the inner surface of the crucible in a region extending up to 0.3 M above the surface level of the remaining melt, and the number of brown rings per unit area ($cm^2$) in the region extending from the initial surface level of the melt to 0.3 M below is at least 1.8-fold greater than the number of brown rings in the region extending up to 0.3 M above the surface level of the remaining melt.

10. (previously presented) The quartz glass crucible to Claim 9, wherein the number of brown rings per unit area ($cm^2$) in the region extending from the initial surface level of a melt to 0.3 M is at least 2.5-fold greater than the number of brown rings in the range up to 0.3 M above the surface level of the remaining melt.

11. (previously presented) The quartz glass crucible according to Claim 7, wherein the inner surface of the crucible in the region extending from the initial surface level of a melt to 0.3 M is subjected to an etching treatment or a sandblast process, and the number of brown rings per unit area ($cm^2$) in the region after pulling up the silicon single crystal is at least 1.8-fold greater than the number of brown rings in the region up to 0.3 M above

the surface level of the remaining melt which is not subjected to the etching treatment or the sandblast process.

12. (previously presented) The quartz glass crucible according to Claim 11, wherein the number of brown rings per unit area ($cm^2$) in the region from the initial surface level of a melt to 0.3 M is 2.5-fold or more greater than the number of brown rings in the region up to 0.3 M above the surface level of the remaining melt.

13. (previously presented) The quartz glass crucible according to Claim 7, wherein the number of brown rings in the region up to 0.3 M above the surface level of the remaining melt is 0.02 to 0.9/$cm^2$.

14. (previously presented) The quartz glass crucible according to Claim 7, wherein the number of brown rings per unit area ($cm^2$) in the region from the initial surface level of a melt to 0.3 M is 2.0 to 5.0/$cm^2$.

15. (canceled)

16. (previously presented) The quartz glass crucible according to Claim 2, wherein the inner surface of the crucible in the range from 0.6 L to 1.0 L from the center of the bottom of the inner surface of the quartz glass crucible to the upper end face along the inner surface thereof is provided by the first transparent layer of natural quartz glass.

17. (currently amended) The quartz glass crucible according to Claim 2, wherein the second transparent layer has a thickness of 0.2 mm or less on the inner surface of the crucible in a range from 0.6 L to 1.0 L from the center of the bottom of the inner surface of the quartz glass crucible.

18. (previously presented) The quartz glass crucible according to Claim 2, wherein the second transparent layer has an average OH group concentration CA from 100 to 300 ppm, the first transparent layer has an average OH group concentration CB from 60 to 150 ppm, and the opaque outer layer has an average OH group concentration CC from 20 to 60 ppm, and said OH group concentrations satisfy the relation: CA > CB > CC.

19. (previously presented) The quartz glass crucible according to Claim 3, wherein the second transparent layer has an average OH group concentration CA from 100 to 300 ppm, the first transparent layer has an average OH group concentration CB from 60 to 150 ppm, and the opaque outer layer has an average OH group concentration CC from 20 to 60 ppm, and said OH group concentrations satisfy the relation: CA > CB > CC.

20. (previously presented) The quartz glass crucible according to Claim 4, wherein the second transparent layer has an average OH group concentration CA from 100 to 300 ppm, the first transparent layer has an average OH group concentration CB from 60 to 150 ppm, and the opaque outer layer has an average OH group concentration CC from 20 to 60 ppm, and said OH group concentrations satisfy the relation: CA > CB > CC.

21. (currently amended) A quartz glass crucible for pulling up a silicon single crystal, said crucible comprising:

an opaque outer layer formed by melting natural silica powder and having an inward facing surface facing toward an interior space of the crucible;

a first transparent layer formed on the inward facing surface of the opaque outer layer, the first transparent layer being of natural quartz glass and having a thickness of 0.4 to 5.0 mm, said first transparent layer having an inward facing surface facing toward the interior space of the crucible; and

a second transparent layer of synthetic quartz glass formed over **only** ~~**at least**~~ a portion of the inward facing surface of the first transparent layer;

the second transparent layer constituting **only** ~~**at least**~~ part of an inner surface of the quartz glass crucible facing the interior space thereof;

the portion of the first transparent layer over which the second transparent layer is formed extending over **at least** an area **extending from** ~~**defined**~~ between two distances along the inner surface from a center of a bottom of the inner surface of the quartz glass crucible;

one of said distances being 0.15 times a total distance along the inner surface from the center of the bottom of the crucible to an upper end of the inner surface of the crucible; and

the other of said distances being 0.55 times the total distance to the upper end of the inner surface of the crucible.

22. (previously presented) The quartz glass crucible of claim 21 wherein the second transparent layer has a thickness of 0.2 to 1.5 mm between said distances from the center of the bottom of the crucible.

23. (previously presented) The quartz glass crucible according to Claim 1, wherein the second transparent layer includes an upper transparent layer portion extending beyond a distance of 0.6 times the distance from the center of the bottom of the crucible to the upper end of the inner surface of the crucible, said upper transparent layer portion being 0.2 mm or less in thickness.

24. (previously presented) The quartz glass crucible according to Claim 21, wherein the inward facing surface of the first transparent layer of natural quartz glass constitutes the inner surface of the crucible beyond a distance of 0.6 times the distance from the center of the bottom of the crucible to the upper end of the inner surface of the crucible.

25. (previously presented) The quartz glass crucible according to Claim 21, wherein

the opaque outer layer has an average OH group concentration from 20 to 60 ppm,

the first transparent layer has an average OH group concentration greater than that of the opaque outer layer and in a range of from 60 to 150 ppm and, and

the second transparent layer has an average OH group concentration greater than that of the first transparent layer and in a range of from 100 to 300 ppm.

26. (new) A quartz glass crucible for pulling up a silicon single crystal, said quartz glass crucible comprising:

an opaque outer layer formed by melting natural silica powder and a first transparent layer formed on an inside thereof,

the first transparent layer being of natural quartz glass and having a thickness of 0.4 to 5.0 mm, and

a second transparent layer formed over an inner surface of the crucible,

wherein the second transparent layer has a varying thickness,

wherein, from a center of a bottom of the inner surface of the quartz glass crucible to 0.55 L therefrom, the thickness of the second layer is 0.3 mm or greater, and wherein, from 0.6 L to 1.0 L from the center of the bottom of the crucible, the thickness of the second layer is 0.2 mm or less, where L is a distance measured adjacent the inner surface of the crucible from the center of the bottom of the inner surface of the quartz glass crucible to an upper end face of the quartz glass crucible.

27. (new) The quartz glass crucible according to Claim 26, wherein the second transparent layer has an average OH group concentration CA from 100 to 300 ppm, the first transparent layer has an average OH group concentration CB from 60 to 150 ppm, and the opaque outer layer has an average OH group concentration CC from 20 to 60 ppm, and said OH group concentrations satisfy the relation: CA > CB > CC.

28. (new) A quartz glass crucible as recited in claim 26, wherein the second transparent layer has an upper end below the upper end face of the crucible.